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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,413	06/20/2006	Naohiro Yoshida	128229	3192

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EXAMINER

CHUO, TONY SHENG HSIANG

ART UNIT	PAPER NUMBER
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1729

NOTIFICATION DATE	DELIVERY MODE
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02/03/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/583,413	Applicant(s) YOSHIDA, NAOHIRO	
	Examiner Tony Chuo	Art Unit 1729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,22,26,27,32,33 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39 and 40 is/are allowed.
- 6) ☒ Claim(s) 20,22,26,27,32,33 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claims 20, 22, 26, 27, 32, 33, 35-40 are currently pending. Claims 1-19, 21, 23-25, 28-31, and 34 are cancelled. New claims 39 and 40 have been added. The amended claims do overcome the previously stated 112, 2nd paragraph rejection. However, upon further consideration, claims 20, 22, 26, 27, 32, 33, 35-38 are rejected under the following new 112, 1st paragraph rejection. Claims 39 and 40 are allowed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 20, 22, 26, 27, 32, 33, 35-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 20 and 32, the limitation "concentration calculating means for calculating a concentration of the oxidization gas on the cathode side by the obtained gas pressure decrease amount" is not supported by the specification. The specification discloses on pg. 17, lines 12-15, "the oxygen gas concentration in the air remaining on

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the cathode side decreases. The controller detects the oxygen gas concentration in the residual air by the output from the oxygen concentration sensor.". The concentration of the oxidization gas on the cathode side is detected by an oxygen concentration sensor, not calculated by the obtained gas pressure decrease amount. The specification also discloses that "The amount of oxygen gas consumed may be calculated by the controller from the pressure decrease in the hydrogen gas at the anode.

Allowable Subject Matter

4. Claims 39 and 40 are allowed.

Claims 20, 22, 26, 27, 32, 33, and 35-38 would be allowable if the 112, 1st paragraph rejection is obviated.

The Yoshida reference discloses a fuel cell system comprising a fuel cell stack "10" which generates electricity by a chemical reaction between hydrogen (fuel gas) supplied to an anode side of the fuel cell stack and air (oxidization gas) supplied to a cathode side of the fuel cell stack; a control unit "100" that determines whether hydrogen migration through the electrolyte membrane (chemical short) is occurring in the fuel cell during the intermittent operation mode when the supply of fuel gas and oxidization gas to the fuel cell is stopped; a compressor "41" for supplying a small amount of air (scavenging gas) to the cathode side that is less than the amount of air supplied to the cathode side when the fuel cell is idling when it has been determined that there is hydrogen migration through the electrolyte membrane; a pressure sensor "51" for detecting a gas pressure of the hydrogen on the anode side of the fuel cell

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stack; valves "24" & "25" for closing off the anode side of the fuel cell stack when the supply of hydrogen and air to the fuel cell stack is stopped, wherein the control unit "100" also obtains a gas pressure decrease amount of the hydrogen sealed on the anode side by the anode side being closed off by the valves "24" & "25".

Regarding independent claims 20 and 32, Yoshida does not expressly teach calculating a consumption amount of the oxidization gas on the cathode side and determining whether the consumption amount is greater than a second reference value that is set to a value smaller than the first reference value.

Regarding independent claims 39 and 40, Yoshida does not expressly teach calculating a gas pressure decrease amount of fuel gas sealed on the anode side and determining whether the gas pressure decrease amount is greater than a second reference value that is set to a value smaller than the first reference value.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Chuo whose telephone number is (571)272-0717. The examiner can normally be reached on M-F, 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ula Ruddock can be reached on (571) 272-1481. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC

/Ula C Ruddock/
Supervisory Patent Examiner, Art Unit 1729